

Notice of Allowability

Application No.

09/737,194

Examiner

Xu Mei

Applicant(s)

FINK ET AL.

Art Unit

2644

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to application filed 12/13/2000.
2. ☒ The allowed claim(s) is/are 1-16.
3. ☒ The drawings filed on 13 December 2000 are accepted by the Examiner.
4. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☒ All b) ☐ Some* c) ☐ None of the:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☒ Certified copies of the priority documents have been received in Application No. 09/004,927.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
 6. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying Indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).**
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☒ Information Disclosure Statements (PTO-1449 or PTO/SB/08),
Paper No./Mail Date 3/12/2001
4. ☐ Examiner's Comment Regarding Requirement for Deposit
of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☐ Interview Summary (PTO-413),
Paper No./Mail Date _____
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____

Art Unit: 2644

1. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Alais et al, Fink et al (US-6161434, 6198829), Tanigawa, Oeschger, Candy, Gilbert et al, Berryman, and Yang are made of record here as pertinent art to the claimed invention.

Alias et al discloses a device for echography by means of focused ultrasonic beams with a mosaic of transducers.

Fink et al (US-6161434) discloses method and device for detecting and locating a reflecting sound source.

Tanigawa discloses an object detecting system using ultrasonic waves.

Fink et al (US-6198829) discloses process and device for sound sweeping a space using acoustic waves with a number of loudspeakers.

Oeschger discloses an acoustic scattering measurement and process for determining variances in multiple features.

Candy discloses method and apparatus for dynamic focusing of ultrasound energy.

Gilbert et al discloses a multidimensional beamforming device.

Berryman discloses a method for distinguishing multiple targets using time-reversal acoustics.

Yang discloses an underwater telemetry apparatus and method including phase correction and feedforward filter for processing signals beamforming.

Art Unit: 2644

2. The following is an Examiner's Statement of Reasons for Allowance:

The prior art fails to disclose or suggest a device or a process for focusing and temporal compression of acoustic energy into at least one location that including means for causing emission of a brief acoustic pulse with a first duration from the location, an array of transducers, a multi-scattering medium (as specifically defined and understood in pages 2-3 of the specification) to be interposed between the transducer array and the location, and arranged to provide a time spreading of the acoustic pulse so as to increase the duration of the pulse by at least one order of magnitude at the level of the transducer array, the transducer array being controlled to emit acoustic signals obtained by temporal inversion and amplification of acoustic signals picked up in response to the emission of the pulse as recited and construed in independent claims 1 and 13. Applicant's invention of comprises a particular combination of elements and functional steps that is neither taught nor suggested by the prior art.

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3. Any comments considered necessary by applicant must be submitted no later than the payment of the Issue Fee and, to avoid processing delays, should preferably accompany the Issue Fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Xu Mei whose telephone number is 703-308-6610. The examiner can normally be reached on Monday-Friday (9:30-6:00), alternate Friday off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Sinh Tran can be reached on 703-305-4040. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Xu Mei

Primary Examiner

Art Unit 2644

6/3/05